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The issue of missiles in all its aspects

Report of the Secretary-General

Summary

The present report was prepared by the United Nations Institute for Disarmament Research with the support of qualified consultants pursuant to General Assembly resolution 59/67 to address the issue of missiles in all its aspects. It describes the background and current situation in the field of missiles and identifies the areas of existing consensus as well as those areas where consensus can be reached.

The report concludes that States acknowledge that reaching consensus on all aspects of the issue of missiles cannot be accomplished in a single step. However, most States agree that the existing situation is unsatisfactory and that arms control and disarmament measures on missiles are presently unattainable. On this basis, the report recommends that the United Nations address the substantive content and appropriateness of missile-specific confidence-building measures at the national, bilateral, regional and international levels. The second area of possible consensus builds upon the existing agreement on the control of man-portable air defence systems. The report recommends the consolidation of efforts to control man-portable air defence systems under the aegis of the United Nations, with a view to enhancing the controls and assistance elements identified in General Assembly resolution 60/77 and broadening support for current international, regional and national efforts to combat and prevent the illicit transfer of man-portable air defence systems.

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I. Introduction

1. Pursuant to General Assembly resolution 55/33 A of 20 November 2000, a Panel of Governmental Experts was established in 2002 to assist the Secretary-General in the preparation of a report on the issue of missiles in all its aspects. The report (A/57/229), which was the first effort by the United Nations to address the issue of missiles in all its aspects, was welcomed by the General Assembly in its resolutions 57/71 of 22 November 2002 and 58/37 of 8 December 2003.

2. By resolution 58/37, the General Assembly requested the Secretary-General, with the assistance of a Panel of Governmental Experts to be established in 2004 on the basis of equitable geographical distribution, to explore further the issue of missiles in all its aspects and to submit a report for consideration by the Assembly at its fifty-ninth session. This second Panel held a comprehensive, in-depth exchange of views on the issue of missiles in all its aspects. By the end of its work in July 2004, and given the complexity of the issues at hand, no consensus was reached on a report by the Panel.

3. The present report responds to General Assembly resolution 59/67 of 17 December 2004, by which the Assembly requested the Secretary-General to prepare a report, with the support of qualified consultants and the United Nations Institute for Disarmament Research, as appropriate, taking into account the views expressed by Member States, to contribute to the United Nations endeavour to address the issue of missiles in all its aspects by identifying areas where consensus could be reached, and to submit it to the Assembly at its sixty-first session.

4. By the same resolution, the Assembly also requested the Secretary-General, with the assistance of a Panel of Governmental Experts to be established in 2007 on the basis of equitable geographical distribution, to further explore further ways and means to address within the United Nations the issue of missiles in all its aspects, including identifying areas where consensus could be reached, and to submit a report for consideration by the Assembly at its sixty-third session.

5. In preparing the present report, the consultant and the United Nations Institute for Disarmament Research held comprehensive informal consultations and undertook thorough research on the full range of open sources covering technical, strategic, political and arms control and disarmament aspects of missile-related issues in 2005-2006. The conclusion is that despite the complex and sensitive nature of missile issues, areas of consensus either exist or are within reach, and can form the basis for further missile-related efforts in the framework of the United Nations.

II. Understanding the lack of consensus on the issue of missiles in all its aspects

6. The two panels of governmental experts convened by the United Nations in 2002 and 2004 were unique opportunities to gauge the current existence and future likelihood of consensus on the issue of missiles in all its aspects. There is no other forum where experts from States with extremely diverse perspectives can engage in comprehensive and thorough discussion of these issues, with the explicit objective of reaching consensus on the issue of missiles in all its aspects.

7. The first panel produced a comprehensively factual report, primarily describing and explaining the current situation and its background, including the technical characteristics of ballistic, cruise and other missiles and the various international instruments set up to address them. While it did not succeed in reaching consensus on substantive conclusions, even less so recommendations, it did prepare the ground for further deliberations on the issue.

8. The second panel was unable to build on the work of its predecessor. This strongly suggested that while States can agree on the current reality, they are unable to agree on what to do about it. Furthermore, a central challenge for the second panel was that it was tasked to explore further exactly the same issues as those addressed by the first panel. The all-encompassing nature of the mandate to address the issue of missiles in all its aspects prevented the second panel from adopting a report reflecting those areas where agreement existed or was within reach.

9. The second panel's inability to agree on a report further confirmed, under current and foreseeable circumstances, a consensus on all aspects of the issue of missiles is unlikely to be reached. Indeed, the experience of both panels clearly indicates that there exist substantial disagreements on central issues pertaining to matters of priority, comprehensiveness and universality. Should missiles be addressed in themselves or purely as delivery vehicles for weapons of mass destruction (priority)? Which categories of missiles from among an extraordinarily diverse spectrum from shoulder-fired rockets to intercontinental ballistic missiles, should be addressed (comprehensiveness)? Should arrangements necessarily involve the entire international community or only some States (universality)?

10. Particularly sensitive and contentious issues divide, inter alia:

- States that support active ballistic missile defences from States that oppose them
- States primarily concerned with ballistic missiles capable of weapons of mass destruction roles from States primarily concerned with cruise missiles in conventional or nuclear mode
- States which favour gradual step-by-step approaches to address missile-related issues from States which consider comprehensiveness and universality as sine qua non
- States that regard the Missile Technology Control Regime, the Wassenaar Arrangement and the Hague Code of Conduct as promising building blocks from States that consider these and other arrangements as inherently flawed for reasons of substantive comprehensiveness and/or political inclusiveness
- States that are receptive from others that are less so, or averse, to missile-related transparency measures
- States that consider as absolute the right to space-launch capabilities for peaceful purposes from others that regard this right as qualified and conditional

A. Shifting priorities, scope and methods in addressing missile-related issues in the United Nations context

11. There is an emerging tendency to perceive missiles as intrinsically important regardless of how they are armed. From this perspective, a missile can be of great significance even if armed with conventional explosives or not armed at all, relying exclusively on kinetic energy to achieve destruction. Another tendency has become apparent where an increasing number of States are involved in missile-related diplomacy, an area that was largely addressed in a bilateral context until the late 1980s. In parallel, there is a tendency to attempt to devise approaches and measures applicable to an increasing variety of missiles, such as man-portable air defence systems, cruise missiles and ballistic missiles.

12. The three issues of priority, comprehensiveness and universality have complicated consideration by the United Nations of the issue of missiles for five decades. No universal norm, treaty or agreement governing the development, testing, production, acquisition, transfer, deployment or use of missiles exists. The treatment of missile-related issues in the United Nations has tended to fluctuate between approaches characterized by comprehensiveness and those characterized by selectivity, as evident in the following survey of relevant documents.

B. Missiles as delivery vehicles?

13. Initially, missile issues were addressed exclusively by inference, as part of the efforts to address nuclear priorities. Only gradually over the years has their treatment become more explicit.

14. In the beginning, missiles were seen not as a distinct priority but as part of broad mandates covering all aspects of disarmament. In one of the first efforts to articulate a comprehensive approach to disarmament challenges, the General Assembly established a basic distinction between nuclear weapons and all other weapons. General Assembly resolution 808 (IX), of 4 November 1954, reflects confusion over missiles, which can be used — and were designed from the start — for both nuclear and conventional roles. To many observers, it seemed as if missiles were essentially part of nuclear weapon systems, but it was their use in delivering conventional weapons that developed most rapidly.

15. The launch on 4 October 1957 of Sputnik, a satellite placed in orbit by a rocket with unambiguous intercontinental capability, elicited many proposals for restraint. In the General Assembly, this took the form of an indirect response, implicit in a new call for "measures against the possibility of surprise attack" (resolution 1252 (XIII) of 4 November 1958). Once again, missiles were not emphasized per se.

16. The Final Document of the Tenth Special Session of the General Assembly (resolution S-10/2 of 30 June 1978) situates missiles as elements of the nuclear arms race and focuses on their role as nuclear delivery vehicles.

17. Security Council resolution 687 (1991) makes an explicit link between missiles and weapons of mass destruction when it refers to "the goal of establishing in the Middle East a zone free from weapons of mass destruction and all missiles for their delivery ...".

18. Security Council resolution 707 (1991) refers to "programmes to develop weapons of mass destruction and ballistic missiles" and "material or equipment relating to [Iraq's] nuclear, chemical or biological weapons or ballistic missile programmes". This phrase can be interpreted either to mean that ballistic missiles were understood as a component in weapon systems armed with weapons of mass destruction, or that ballistic missiles were of equal and separate importance.

19. Security Council resolution 1540 (2004) affirms that the proliferation of nuclear, chemical and biological weapons, as well as their means of delivery to non-State actors, constitutes a threat to international peace and security. For the purposes of the resolution only, means of delivery are defined as "missiles, rockets and other unmanned systems capable of delivering nuclear, chemical or biological weapons that are specifically designed for such use".

C. Which missiles?

20. While the United Nations began by considering missiles merely as delivery systems, by the 1990s it had become increasingly common for various categories of missiles to become a focus of attention in themselves.

21. One indication of this new focus was the United Nations Register of Conventional Arms established in 1992, a voluntary register for international arms transfers. It covers, inter alia, "guided and unguided rockets, ballistic missiles and cruise missiles capable of delivering a warhead or weapon of destruction to a range of at least 25 kilometres", reflecting the shift in the 1990s towards covering most types of missiles, both conventional and non-conventional.

22. Among the categories of missiles considered by the United Nations for particular attention were the following.

Ballistic missiles

23. In the late 1990s, while the United Nations broadened the objects of discussion by emphasizing missiles in general, it also narrowed deliberations to additional specific categories. For instance, the General Assembly called for the preservation of the Anti-Ballistic Missile Treaty, asking the United States and the Russian Federation to constrain their missile defence deployments to fit treaty limitations.

24. By its resolution 59/91, of 3 December 2004, the General Assembly welcomed the adoption of the Hague Code of Conduct and invited all States that had not yet done so to subscribe to it. The resolution was approved by a recorded vote of 137 in favour to 2 against, with 16 abstentions. The resolution emphasized the significance of regional and international efforts to prevent and curb comprehensively the proliferation of ballistic missile systems capable of delivering weapons of mass destruction. With 120 subscribing States to date, the Hague Code of Conduct is the first international instrument with a stated vocation to universality, which singles out ballistic missiles capable of delivering weapons of mass destruction as an object of international concern.

Cruise missiles

25. One of the sharpest debates over the comprehensiveness of scope focuses on the question of including cruise missiles in international deliberations, negotiations

and measures. Technically, cruise missiles are able to perform many of the same military missions as ballistic missiles. They have been used much more widely than ballistic missiles in military interventions since the end of the cold war. Although the cruise missiles used in conflicts to date have carried conventional high explosives, they have clear weapons of mass destruction capabilities. The customary understanding, associating ballistic missiles with weapons of mass destruction and cruise missiles with conventional warheads, appears to be breaking down. Technical trends are creating greater interest in conventionally armed long-range ballistic missiles, while more military forces acquire cruise missiles.

26. In the United Nations context, cruise missiles have received some attention since the end of the cold war, particularly in the Register of Conventional Arms, the report of the first Panel of Governmental Experts (A/57/229) and the Security Council resolutions related to the destruction of Iraq's missile capabilities.

Man-portable air defence systems

27. Since 2002, man-portable air defence systems have become a subject of increasing international attention, including in the United Nations. The report of the Secretary-General, *In larger freedom* (A/59/2005, para. 101), puts man-portable air defence system and ballistic missiles on an equal footing among missile-related security challenges:

> The availability of ballistic missiles with extended range and greater accuracy is of growing concern to many States, as is the spread of shoulder-fired missiles which could be used by terrorists. Member States should adopt effective national export controls covering missiles and other means of delivery for nuclear, biological and chemical weapons, rockets and shoulder-fired missiles, as well as a ban on transferring any of them to non-State actors. The Security Council should also consider adopting a resolution aimed at making it harder for terrorists to acquire or use shoulder-fired missiles.

28. In 2003, the Register of Conventional Arms was amended to add provisions for reporting transfers of man-portable air defence systems. Reporting under the Register remains completely voluntary, but participation has expanded over the years to include most Member States.

29. General Assembly resolution 60/77 of 8 December 2005 calls for international, regional and national efforts to combat and prevent the illicit use of man-portable air defence systems and unauthorized access to and use of such weapons. This resolution, covering one specific type of missile system, is unique in two ways. First, it was adopted by consensus, an unusual occurrence in the missile area. Second, and illustrating once again the diversity and complexity of missile issues, the resolution refers not to any existing missile-related agreement, but to the Programme of Action on Small Arms (A/CONF.192/15, chap. IV, para. 24).

30. Of three categories of missile systems — ballistic missiles, cruise missiles and man-portable air defence systems — the latter is the one whose treatment in the international community is the most recent, but also the most advanced. There exist rigorous measures stipulated by the Wassenaar Arrangement's participating States and later adopted in almost identical form by the Organization for Security and Cooperation in Europe, as well as a number of other relevant regional initiatives, whose observance could be broadened as widely as international consensus and its

evolution allows. Symmetrically, the universal consensus expressed by General Assembly resolution 60/77 could be deepened to encompass as many specific measures as possible.

D. Universality or segmentation?

31. With reference to missile issues, observance of the norm of universality in the United Nations has fluctuated on occasion, with resort to some segmentation and singularizing of specific States.

32. This appeared initially with expressions by the General Assembly of support and encouragement for bilateral nuclear arms control and its implications for some missiles. The 1987 Intermediate Range Nuclear Forces Treaty (INF Treaty), eliminating the intermediate-range and shorter-range ground-launched ballistic and cruise missiles of the United States of America and the then Union of Soviet Socialist Republics, was thus welcomed by the General Assembly.

33. Segmentation also occurred with expressions of concern about the missile-related activities, in particular ballistic missile programmes, of Israel and South Africa in the 1980s.

34. The strongest action against any single country related to missiles was contained in Security Council resolution 687 (1991), which stipulated that "Iraq shall unconditionally accept the destruction, removal, or rendering harmless, under international supervision, of ... (a)ll ballistic missiles with a range greater than one hundred and fifty kilometres and related major parts, and repair and production facilities".

35. Apart from the above-mentioned instances of focus on specific countries, the General Assembly has generally resorted to approaches stressing the importance of missiles in themselves, addressing all missiles comprehensively and seeking universal participation. The Assembly's resolution of 1999 on missiles (resolution 54/54 F of 15 December 1999) and its resolution of 2000 calling for the creation of a Panel of Governmental Experts (resolution 55/33 A of 20 November 2000), instead of emphasizing particular kinds of missile technology or the missile activities of specific countries, endorsed comprehensive themes consistent with the spirit of previous resolutions in the field of arms control and disarmament. This trend is also evident in the resolution calling for the present report.

III. Proposals for missile control and disarmament

A. Experts' proposals for missile controls and missile disarmament

36. Amid the international community's difficulties in making progress on missile-related issues, a number of arms control experts have made proposals of direct relevance to the subject at hand. While certain areas for action are more promising than others, ambitious proposals deserve serious consideration regardless of the immediate prospects. In an international environment where responses to the global spread of missile technology include not just arms races and defences, but pre-emptive attack and preventive warfare, consideration of broad mechanisms for

missile restraint is vital. Among the most important kinds of restraint measures proposed in recent years are the following.

Proposals for zero ballistic missiles

37. The outright prohibition of a particular type of weapon remains the most thorough, ambitious and effective of all disarmament measures. After being considered by the Union of Soviet Socialist Republics and the United States at the 1986 Reykjavik summit, the idea of banning all ballistic missiles has received regular consideration by disarmament specialists. In the specialized literature, these proposals usually involve missile disarmament in successive, cumulative phases, and stress the aim of seeking both global and regional stability in a non-discriminatory way. Such legally binding and universal agreements are also put forward with the aim of avoiding races between offensive missiles and missile defences, as well as the cost of the latter.

Proposals for banning missiles of specific ranges

38. Rather than eliminate all ballistic missiles, less ambitious agreements targeting missile systems believed to be especially dangerous to regional and international stability have also been proposed. The only such agreement in existence is the 1987 INF Treaty between the Union of Soviet Socialist Republics and the United States, which eliminated ground-launched ballistic and cruise missiles with ranges of 500 kilometres to 5,500 kilometres. In the specialized literature a number of proposals have been made for new agreements following the INF Treaty model, whether on a global or regional scale, while acknowledging the difficulties involved.

39. Other categories of missiles which might be considered for prohibition and elimination include intercontinental ballistic missiles, intermediate-range ballistic missiles, all missiles armed with weapons of mass destruction and man-portable air defence systems. As shown by prior practices in the United Nations, outlined above, virtually any type of weapon technology can be isolated for elimination. The foremost negotiated example is the Treaty between the United States of America and the Russian Federation on Further Reduction and Limitation of Strategic Offensive Arms (Start II Treaty), which provided for the elimination of multiple-warhead intercontinental ballistic missile launchers and of heavy intercontinental ballistic missiles, although it never entered into force.

40. Cruise missiles, especially conventionally armed cruise missiles, have not been singled out for missile bans or quantitative restrictions, other than implicitly in the context of some proposals for agreements following the pattern of the INF Treaty. Existing suggestions confine themselves to less ambitious measures, such as the introduction of cruise missiles into the purview of the Hague Code of Conduct, and strengthening the relevant provisions of the Missile Technology Control Regime.

Controlling deployment and modernization

41. The established precedents in the missile field involve not universal bans but bilateral limits on the number and types of missiles that States maintain. The three fully ratified Soviet-American and Russo-American strategic weapons treaties (the Anti-Ballistic Missile Treaty, the Start I Treaty and the Moscow Treaty) all emphasize limits on deployment and modernization. These agreements were based on the premise that the outright elimination of such weapons was unattainable, but

that mutual security was greatly enhanced by mutual acceptance of limits on the parties' missiles forces. Treaties of a similar nature might be envisaged by other States or regions or even at the global level. In the specialized literature such proposals, however, have been formulated largely with a focus on nuclear weapons rather than on the missiles intended to deliver them.

Limits on deployment; regional limits and bans

42. Some of the most successful regional arms control agreements focus only on limiting the number of weapons of a particular type that can be deployed. This principle has been applied to missiles bilaterally under the 1972 Interim Agreement (Salt I) and regionally to conventional weapons under the 1990 Treaty on Conventional Armed Forces in Europe. Neither treaty prohibits modernization; they only limit the numbers of controlled systems that can be deployed. With specific reference to missiles, proposals have been made for regional limitation regimes involving ceilings on number and/or ranges of deployed missiles in a given area, in some cases with the further objective of outright missile disarmament.

43. Proposals for a Zone Free from Weapons of Mass Destruction in the Middle East include consideration of the need for regional commitments not to possess or deploy missiles with ranges above an agreed threshold. Discussions usually emphasize ballistic missiles, although cruise missiles are also mentioned. The literature on this subject acknowledges that the non-possession of such missiles would require specific provisions, given that missiles, unlike chemical or biological weapons, are not subject to any universal ban.

44. Proposals for addressing issues related to missiles and missile-defence systems in North-east Asia include an incremental negotiated process with the aim of gradually advancing towards a regional ban on surface-to-surface missiles of any kind.

Limits on testing

45. Complete bans on the flight testing of larger missiles are readily verified through a variety of techniques, as are bans on the static testing of larger missile motors. The dual-use nature of ballistic missiles (which are largely interchangeable with space launch vehicles) and cruise missiles (which share key characteristics with remote piloted vehicles) creates special challenges for verification and confidence-building, but these challenges are neither unprecedented nor exceptional, and have been overcome in other fields of international disarmament. Despite this apparent potential, this option remains relatively underdeveloped both in practice and in the existing specialized literature.

Export controls

46. Export controls, as applied to missiles and missile-related technology, are primarily the responsibility of States and are coordinated, in some instances, through voluntary multilateral arrangements such as the Wassenaar Arrangement and the Missile Technology Control Regime, whose participating States accept limits on their freedom to share missile technologies. As is argued in much of the specialized literature, the effectiveness of such arrangements would be enhanced if the participation of all missile-significant States could be secured. The broadening of these export control arrangements, however, is of high political sensitivity.

B. The Global Control System proposal

47. In addition to proposals by non-governmental experts during the last few years, the Russian Federation has since June 1998 proposed a Global Control System for Non-Proliferation of Missiles and Missile Technologies. The main international mechanisms and measures of the Global Control System would include transparency and a monitoring system for missile launches; consideration of security guarantees and incentives for States forgoing or relinquishing weapons of mass destruction-capable missiles; international consultations on missile-related issues; regional confidence-building measures; and international cooperation for the launching of civilian space objects.

C. Longer-term proposals and interim measures

48. The above survey of existing proposals on missile-related issues clearly indicates that the majority of such proposals are focused on ballistic missiles, especially those capable of carrying nuclear weapons. The Global Control System constitutes the most fully developed set of options for building on existing achievements by the Hague Code of Conduct on a multilateral basis, and under the auspices of the United Nations. Conventionally armed missiles and cruise missiles have not received similar attention, with the recent exception of man-portable air defence systems.

49. In addition, the above proposals are broadly acknowledged, including by their authors, to be mid- to long-term prospects at best. While prospects for implementation in the foreseeable future should not be overestimated, even in the current international environment, such proposals deserve serious consideration.

50. Scheffran thus notes that "Strengthening ballistic missile controls will be a long-term process necessarily involving the adoption and evolution of a wide range of measures from the comparatively modest — i.e. a Code of Conduct, bolstered export controls, and missile monitoring and launch-notification agreements — to far-reaching disarmament treaties establishing global missile bans. ... Even though the prospects for such a comprehensive disarmament regime based on multilateral agreements currently seem remote ... this should not exclude conceptual thinking and diplomatic initiatives that broaden political support for such a regime."[1]

51. Likewise, Kurosaki states that, given "the present political environment in the region", his proposal for a North-east Asia missile control and disarmament regime "is intended only to become a starting point for a future policy discussion on cooperative missile control and disarmament in North-east Asia. The feasibility of a proposed regional missile limitation regime is uncertain. However, at least, it seems unquestionable that an initiative to start such a discussion is very much needed today."[2]

52. In the interim, other measures short of actual arms reductions or disarmament also need to be explored. While more modest than the proposals summarized above,

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[1] Jürgen Scheffran, "Moving Beyond Missile Defence: The Search for Alternatives to the Missile Race", *INESAP Information Bulletin*, No. 18, September 2001, p. 10.

[2] Akira Kurosaki, "Proposal for a Regional Missile Limitation Regime: An Alternative to Missile Defence in Northeast Asia", *Journal on Science and World Affairs*, vol. 1, No. 1, p. 13.

such confidence-building measures may contribute to alleviating some of the more salient missile-related international security concerns.

IV. Towards targeted consensus

53. Despite the persistence of sensitive and contentious issues related to missiles in recent years, as noted in paragraph 10 above, which help to explain the difficulties encountered, several areas of existing convergence can be identified, which suggest that further consensus can in fact be developed.

A. Where consensus exists

54. The first area of consensus is that the current situation on missiles (in terms of development, possession and deployment) is unsatisfactory. All States would concur that missiles produce significant and, in certain cases, deleterious effects upon the international security environment. Most States would also acknowledge (albeit for different reasons) that the situation as it stands, in terms of possession and/or proliferation, and in terms of the international efforts to control missiles, is unsatisfactory.

55. Second, and following on from this general acknowledgement that missiles exert effects on international security, it is universally argued that these effects are only negative in the case of another State's missiles. No State regards its own missiles as unduly threatening, and all look upon their missiles as both necessary and legitimate. No State regards its own missiles as part of the problem: on the contrary, missiles are often claimed to be a response to the problem, rather than a part of it.

56. A third area of consensus is that optimum solutions are out of reach, principally because a shared view on what those solutions might be is lacking. Certainly, far-reaching solutions such as bans on missiles (ballistic and/or cruise), regional missile-free zones and other disarmament-oriented options (see paras. 36-46 above) are not going to receive universal, or even majority, support for the foreseeable future. Nonetheless, it appears that most or all States would still concur that if current trends continue, then an already unsatisfactory situation is likely to continue or deteriorate further, rather than improve.

B. Where consensus does not exist

57. Attempts to reach consensus on the issue of missiles in all its aspects are hampered by the emergence of sharp disputes over individual issues. The impact of missile defence, for example, continues to cause controversy and it is highly unlikely that any consensus can be reached in the near future.

58. A discrepancy in international normative practice also appears to be emerging over missile use. On the one hand, a norm of no-first-use appears to be gradually emerging for ballistic missiles, perhaps as a consequence of their lack of accuracy and their widespread status as deterrent weapons. On the other, cruise missiles seem exempt from any such norm and, in fact, have been heavily used in conflict. Reconciling these two norms is not impossible, but attempting to do so in a report

on the issue of missiles in all its aspects presents serious difficulties. As with missile-based anti-missile defences, it appears unlikely that a consensus can be reached in the near future.

59. These examples of absence of consensus militate in favour of a more selective approach in assessing where consensus might lie in the deliberations of a third Panel of Governmental Experts.

C. Where consensus can be developed

60. Amid the controversy, some encouraging developments suggest that pools of consensus are emerging. States that would normally be at loggerheads on a global common position are in fact moving in similar directions, often independently of each other. Consider the following examples.

61. The subscribing States to the Hague Code of Control are committed to transparency measures, hitherto present only in bilateral agreements rather than multilateral ones, thereby developing a norm without precedent in the missile area.

62. India and Pakistan have established a rigorous pre-launch notification regime which covers surface-to-surface ballistic missile tests, and commits the parties to at least 72 hours' notice of launch, with further commitments not to test along their borders or near the Line of Control in Kashmir. They have, in short, moved towards a norm of transparency and pre-launch notification at the bilateral level. Reciprocally, the Hague Code of Conduct explicitly provides that "[s]ubscribing States could, as appropriate and on a voluntary basis, develop bilateral or regional transparency measures".

63. In 1999, the Democratic People's Republic of Korea announced a test moratorium on long-range missiles. The moratorium remained in place until July 2006.

64. The United States and the Russian Federation established a comprehensive pre-launch notification system over a number of years, culminating in the 1988 Ballistic Missile Launch Notification Agreement which covers all strategic ballistic missile launches. The Agreement is of unlimited duration, and was meant to be institutionalized under the Joint Data Exchange Centre.

65. It therefore appears that while all cannot agree on how dangerous missiles are, there may be consensus that certain forms of behaviour are dangerous, especially in a strategic relationship where war is a possibility. Therefore, there may already exist an informal consensus that test-launching a missile without informing anyone is an act that is open to misinterpretation, and that misinterpretation is undesirable even if the missile is not.

66. There is no existing or likely consensus that all missiles are inherently dangerous or illegitimate. States are unlikely to agree that they are all contributing to an international security problem, and even less likely to agree that their own missiles are part of a problem. Nonetheless, a consensus appears to be emerging that certain types of behaviour may produce effects that are dangerous.

67. Therefore, the efforts of the international community could be aimed at building a consensus to make missiles less threatening not necessarily by trying to

get rid of them, but by encouraging behaviour that generates confidence about intentions.

V. Building areas of consensus

68. The absence of any mention of weapons of mass destruction and missiles of any kind in the 2005 World Summit Outcome (General Assembly resolution 60/1) further demonstrates that there is presently no prospect for agreement on far-reaching measures such as significant missile reductions, let alone missile disarmament. The only measures that stand some chance of attracting a consensus are less ambitious, but nonetheless significant measures that can contribute to alleviating some of the more salient missile-related security concerns. These are important issues to which a third Panel of Governmental Experts could turn its attention.

A. Towards missile-specific confidence-building measures

69. Confidence-building measures are a tried and tested device in many areas of international security and might offer some prospects for addressing the issue of missiles. Confidence-building measures tailored to numerous kinds of weapons systems, whether conventional or non-conventional, and strategic settings have been evolved, discussed, negotiated and implemented. In comparison, confidence-building measures specifically adapted to the security concerns created or worsened by missiles of various types remain a significantly underdeveloped field.

70. In principle, however, the options are numerous, and will need to be explored to a much greater extent than has hitherto been done if and when international and particular regional strategic conditions become more auspicious for active consideration of new confidence-building measures. This will involve adapting such measures both to the main stages in the life cycles of missile systems and to patterns of missile-related conduct.

B. Elements for adapting confidence-building measures to the life cycle of missile systems

71. The main stages in the life cycle of missile systems include research and development; flight testing; procurement and production; stockpiling/storage; deployment; transfer; use; and retirement and destruction.

Research and development

72. States that choose to acquire missiles embark on a research and development programme either unilaterally, bilaterally or through international cooperation. Research and development may include the creation of research, development, training and testing facilities and the training of technical personnel as well as the actual design and fabrication of missiles and the ground testing of various components.

Flight testing

73. Flight testing refers to the actual testing of a completed missile system in flight and is distinct from ground or static tests. Flight tests are imperative for new and indigenously developed missile systems, while proven missiles acquired externally might not need to be tested. Although flight testing is often non-military in its intent, the timing, location and manner (for instance, without pre-notification) in which it is carried out can be perceived as signalling threats and warnings.

Procurement or production

74. "Procurement" generally refers to the purchase of missiles by a State from external sources while "production" normally refers to the domestic (or joint) manufacture of missiles in militarily significant numbers. Both procurement and production imply a greater commitment on the part of the State to possess missiles, in terms of capital outlay and the development of manufacturing capabilities, than earlier stages in the life cycle.

Stockpiling/storage

75. Despite possessing missiles (whether procured externally or produced internally), States might choose not to induct them in military formations or deploy them in the field. Instead, they might simply want to store or stockpile missiles in their arsenals for deployment or use at a later stage. Although such storage and stockpiling signals a greater commitment on the part of States to possess, and optionally to use missiles, it is still less threatening than the actual deployment of missiles.

Deployment

76. "Deployment" refers to the actual operationalization and employment of the missiles, generally by relevant military units in the field and, depending on the doctrine of use, implies a greater propensity towards actual use in combat. Some doctrines call for pre-emptive or early use of missiles while others call for a retaliatory or late use of missiles.

Retirement and destruction

77. States possessing missiles may opt unilaterally or upon agreement to refrain from the production or acquisition of certain types of missiles or to reduce, retire or eliminate their holdings of such missiles. Such retirement and destruction might be undertaken unilaterally, bilaterally, multilaterally and with or without verification and inspection.

C. Elements for adapting confidence-building measures to patterns of missile-related conduct

Acquisition

78. Missiles of one type or another are present in the military equipment of virtually all States around the world. The motivations for States to acquire, possess and use missiles of different types vary. Some States are motivated to acquire missiles on account of their politico-strategic environment as well as the particular

characteristics and capabilities of particular missile systems. The main such characteristics of missiles are discussed in the report of the first Panel of Governmental Experts (A/57/229, sect. II.C). The modernization of military doctrines and equipment, whether carried out by States individually or in the context of alliances, can also lead to the acquisition and transfer of missile systems. Another major determinant of States' acquisition of missiles can be the possession, threat of use, and most especially, the actual use of missiles against them. The impetus to acquire missiles in order to defend against and deter the use of similar missiles by an adversary is all the more potent if the policies also involve the possession, use or threat of use of non-conventional weapons, if military means are unavailable or unaffordable as an alternative to missiles, and if outside security assurances and/or assistance are not available.

Transfer

79. Missiles of many types are commonly transferred among States. Transfers of missiles, missile defence systems and technologies are usually carried out for a combination of commercial and politico-strategic motivations, which can involve alliance commitments. Non-State entities, including commercial corporations, also have a prominent role in such transfers across State borders. Transfers can involve complete missile systems or components. In cases of international cooperation in research and development, transfers can also include production equipment and relevant technological information. Such transfers are generally subject to the exporting State's own export control regulations and procedures, where they exist. In some cases, these also reflect the standards of multilateral export control arrangements to which that State subscribes, as well as those that address the exporting State's assessment concerning the implication of such transfers for international and regional security. Concerns have arisen, however, that some missile and missile-related transfers are not carried out with due State authorization and may have an adverse impact on security.

Forgoing/relinquishing

80. Although almost every State possesses some types of missiles, some States also decide to forgo, relinquish or abolish the possession of certain categories of missiles as a matter of policy and as a result of their own assessment of their national security situation and requirements. The absence, unlikelihood or geographical remoteness of an actual or potential threat from missiles or an improvement in the security environment can play a role in such assessments, as can alliance commitments, peace initiatives and other security assurances. Abstaining from seeking or possessing missiles can be a result of the incapacity of a State to acquire them domestically or through import because of economic, technological or industrial constraints. Some States that do possess the economic, technological and industrial ability to develop, produce or import missiles nevertheless choose to abstain from doing so. However, for most States missiles are such a central part of operational and strategic doctrines that controls across the board simply cannot be envisaged.

Restraint

81. States possessing missiles can opt for postures such as de-alerting (separation of warhead from the missile) or de-targeting (setting non-strategic coordinates on

the missiles), which can restrain missile use, or establish "functionally related observable differences" to distinguish between conventional and nuclear missiles, which can reduce misperceptions. Such patterns of missile-related conduct are primarily related to evolving perceptions of the overall security environment and of national security requirements. Restraint can also characterize State practice in missile and missile-related transfers, in view of national or international export control standards and policies. As with the voluntary forgoing and relinquishing of missiles, missile restraint is related to States' own assessment of their security environment.

Use

82. The use of missiles of numerous kinds has become a central feature of contemporary military equipment, strategy, doctrine, operations and tactics. Missiles equipped with nuclear warheads, in particular, still play an important role in the strategies of some States. Nuclear strategies confer a special role on the threat of use of missiles, usually ballistic missiles, as a means of delivering nuclear weapons for purposes including deterrence, compellence or retaliation. There has been no instance of actual use of nuclear-armed missiles. In addition to their nuclear role, cruise missiles may be intended for use as delivery vehicles for biological and chemical weapons, although they have not been used in such configurations. Conventionally armed missiles of all types, including cruise and ballistic missiles, have been used extensively, whether for offensive or defensive purposes, as well as in self-defence. Some types of conventionally armed missiles can be used as weapons of terror, including against populated urban areas. Conventionally armed cruise missiles have been increasingly used in recent years. Other conventionally armed missiles designed for specialized roles, including anti-ship, anti-armour or anti-aircraft missiles, are commonly and extensively used in combat operations worldwide.

D. Missile-relevant confidence-building measures: principles, guidelines and menu of options

83. Confidence-building measures are significant steps voluntarily adopted by States to alleviate or dispel mistrust and tensions inherent to threat perceptions or armed conflict. They can be divided into three categories — information and communication measures; observation and inspection measures; and military constraints — and vary in range from the least intrusive to the most intrusive. Such measures can be unilateral, bilateral, multilateral, regional or global. States decide freely and in the exercise of their sovereignty whether a confidence-building process is to be initiated and, if so, which measures are to be taken and how the process is to be pursued. Confidence-building measures may be elaborated in international agreements or other instruments to which States agree voluntarily to adhere.

Global perspectives

84. Observance of the principles of the Charter of the United Nations contributes to reducing the causes of mistrust regarding military activities, including activities related to missiles.

85. Full implementation of obligations in the field of disarmament, arms control and non-proliferation and cooperation in the elaboration and implementation of adequate measures to ensure the verification of such compliance have a considerable confidence-building effect of their own. In this context, greater diligence towards the missile section in the Register of Conventional Arms might be encouraged.

86. At the global level States can also agree to remain engaged with the issue of missiles and confidence-building measures through continuing discussions and deliberations in various United Nations and non-United Nations forums.

Regional perspectives

87. Regional confidence-building measures can be tailored to specific situations by the States that choose to adopt and implement them. To be effective, concrete measures must be adjusted to the specific threat perceptions and sensitivities in a given context or a particular region. The existence of an appropriate regional forum or organization can be conducive, but is not imperative, to carrying out effective regional confidence-building processes.

88. Notwithstanding regional specificities, in view of the ranges of some missiles, the mobility of some missile-launch platforms and the practice of missile transfers across regions, regional confidence-building measures and their effectiveness over time cannot necessarily be circumscribed to a specific geographical area. They can have constructive transregional effects but their feasibility and impact can also be hampered by transregional and global factors.

Bilateral perspectives

89. Bilateral confidence-building measures can be tailored to specific situations by a pair of States that choose to adopt and implement them. To be effective, concrete measures must be adjusted to the specific threat perceptions and sensitivities in a given context or a particular region. The existence of an appropriate regional forum or organization can be conducive, but is not imperative, to carrying out effective bilateral confidence-building processes.

90. Notwithstanding bilateral specificities, and for the same technical reasons as outlined in paragraph 88 above, bilateral confidence-building measures can have a broader constructive effect, both regionally and globally. Conversely, the feasibility and impact of bilateral confidence-building measures can be hampered by regional or global factors.

National or unilateral perspectives

91. Individual States might unilaterally and voluntarily adopt a series of measures to promote confidence-building measures related to the possession, deployment and possible use of their missiles. The nature and effectiveness of unilateral confidence-building measures are related to the specific threat perceptions and sensitivities in a given context or a particular region, the relationship of the State with its immediate neighbours and region and the adoption of similar reciprocal unilateral measures by a neighbouring State or States.

E. Options for missile-specific confidence-building measures

92. While confidence-building measures of a general or non-military nature can have a favourable impact on missile-related concerns, confidence-building measures can also be tailored specifically to the security concerns raised by missiles. Options for such missile-specific voluntary confidence-building measures could be explored according to their relevance to the main stages in the above-mentioned life cycle of missile systems. Voluntary confidence-building measures, whether unilateral, bilateral, multilateral, subregional, regional or global, could be considered by States freely and in the exercise of their sovereignty for their appropriateness to such stages and to specific situations, on the understanding that any given measure could have a different effect depending on prevailing security conditions. Such voluntary confidence-building measures can be grouped into two categories: information and communication measures; and military constraints.

93. Information and communication measures could include:

- Meetings/workshops under appropriate auspices for discussion of missile-related concerns and measures
- Exchange of information on missile programmes
- Regular reporting to the Register of Conventional Arms
- Reporting of flight tests
- Pre-notification of flight tests
- Full implementation of the Hague Code of Conduct's confidence-building measures, with a view to universal participation, and fully transparent access to subscribing States' confidence-building measure submissions
- Visits (to any sites deemed relevant and appropriate, such as research and development or production facilities, flight-testing sites, decommissioning sites, etc.).

94. Military constraints could include:

- Limits on ranges or other characteristics of missiles tested
- Moratoriums on flight tests
- Ban on flight tests
- Non-deployment of missiles
- De-targeting of missiles
- De-alerting of missiles
- No first-use undertakings covering missiles
- Restraint in missile technology transfer and development of indigenous capabilities
- Moratoria/ban on missile-related transfers.

95. In the sphere of missile-related confidence-building measures, the role of the United Nations could include:

- Encouraging States to report missile transfers systematically to the Register of Conventional Arms
- Encouraging the definition and/or implementation of bilateral, regional and other missile-relevant or missile-specific confidence-building measures, notably in situations in which an appropriate regional or other forum for addressing such matters does not exist
- Continuing to provide a venue within the United Nations for in-depth, inclusive discussion of missile issues, while permitting such discussions to focus on existing and emerging areas of consensus.

VI. Conclusions and recommendations

96. The present report concludes that States acknowledge that reaching consensus on the multifaceted issue of missiles cannot take place in one single step. It also concludes that there are essentially two areas where consensus can be reached.

97. The first area of possible consensus proceeds from two complementary findings:

(a) That all or most States would agree that the existing situation with regard to missiles is unsatisfactory; and

(b) That all or most States would agree that ambitious arms control and disarmament measures on missiles are out of reach at present, and are unlikely to be agreed in the foreseeable future.

98. In this context, the present report recommends:

(a) That work be carried out in the framework of the United Nations, including in the context of the forthcoming Panel of Governmental Experts called for by the General Assembly in resolution 59/67, to address the substantive content and appropriateness of missile-specific confidence-building measures, whether at regional or global levels;

(b) These confidence-building measures could be investigated further with respect to ballistic missiles, for which there already exist some transparency-related confidence-building measures at the bilateral and multilateral (though not universal) levels;

(c) Such measures could also be explored with regard to other categories of missiles, including cruise missiles and missile defence systems, on which no multilateral agreement or confidence-building measures currently exist.

99. A second area is one where actual consensus does exist, albeit on one very particular category of missile systems, man-portable air defence systems. The consensus specific to man-portable air defence systems and to the measures for enhancing their control could be explored further.

100. With regard to man-portable air defence systems, the present report recommends that converging efforts under the aegis of the United Nations be undertaken and sustained to:

(a) Deepen with substantive measures the control and assistance elements identified in General Assembly resolution 60/77; and

(b) Broaden adherence as far as possible to the controls stipulated by existing multilateral agreements and initiatives dealing with man-portable air defence systems.